

CLAIMS

1. A rolled cone manufacturing apparatus, comprising
a concave half and a convex half which form a cavity inside
5 when combined with each other, a cross section of the cavity
having a circular shape in a direction orthogonal to axes of
the concave half and the convex half; and supporting means
which rotatably supports the convex half, on condition that
the axis of the concave half is aligned with the axis of the
10 convex half,

said supporting means being openable and closable, and
pushing, on at least three points, an outer periphery of a part
of the convex half protruding from the concave half onto the
axis, when said supporting means is closed.

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2. The rolled cone manufacturing apparatus according to
claim 1, wherein, the supporting means includes (i) opening
and closing means for, when closed, releasing support of the
axis of the convex half, while, when opened, supporting the
20 axis, and (ii) locking means for keeping the opening and
closing means closed.

25 3. The rolled cone manufacturing apparatus according to
claim 1, wherein, positions of supporting points of the
supporting means are determined in such a manner as to

form either (I) a polygon encompassing the axis of the convex half, by connecting points where the supporting means contacts an outer periphery of a part of the convex half protruding from the concave half, or, (II) when the supporting means functions as a sliding bearing, either a circle around the axis or a closed curved figure by connecting arcs centering on the axis.

4. The rolled cone manufacturing apparatus according to
10 claim 1, wherein rolling objects are provided on respective supporting points of the supporting means.

5. The rolled cone manufacturing apparatus according to
15 claim 1, wherein the convex half is rotatable when the supporting means is closed, while the convex half is movable toward the axis when the supporting means is open.

6. The rolled cone manufacturing apparatus according to
20 claim 1, wherein the concave half has an opening part through which the convex half is fitted in, said supporting means partly protruding inwardly of the opening part when said supporting means is closed.

7. The rolled cone manufacturing apparatus according to
25 claim 1, wherein the concave half has an opening part

through which the convex half is fitted in, a slit-type inlet connected to the cavity is formed at a side of the concave half, and a guiding member to cover a surrounding of the opening part is provided around the inlet and the opening part.

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8. The rolled cone manufacturing apparatus according to claim 1, wherein, when cross sections of the concave half and the convex half are circular in a direction orthogonal to the axes of the concave half and the convex half, the concave half and the convex half are conical-shaped, truncated-cone shaped, or cylinder-shaped.

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9. The rolled cone manufacturing apparatus according to claim 1, wherein the supporting means is a loop-shaped member which is openable and closable.

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10. The rolled cone manufacturing apparatus according to claim 9, wherein, each of the supporting means is a link mechanism including a toggle mechanism, said link mechanism serving as opening and closing means, locking means, and a guiding member for guiding a material sheet into the concave half.

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11. The rolled cone manufacturing apparatus according to claim 9, wherein the supporting means includes, provided

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that a part where the loop of the supporting means is cut off
is referred to as a split part, a positioning and fixing member
for positioning and fixing the split part in place, when the
supporting means is closed, said positioning and fixing
5 member serving as a guiding member when the material sheet
is brought into the concave half.